

- 1) a Petition For Revival Of An Application For Patent Abandoned Unintentionally Under 37 CFR §1.137(b);
- 2) the Petition fee under 37 CFR §1.17(m); and
- 3) a statement (under 37 CFR §1.137(b)(3) that the delay in filing of the response was unintentional.

### Remarks

In the Office Action mailed on January 15, 2002, the Examiner rejected claims 1-26 under 35 U.S.C. §103(a) as being unpatentable over Kaplan et al., U.S. Patent No. 4,842,716, in view of Stein et al., U.S. Patent No. 5,632,865.

With regard to the claim rejections under 35 U.S.C. §103(a), the Applicants respectfully submit that claims 1, 19 and 27 are unobvious in view of any combination of Kaplan et al. '716 and Stein et al. '865 because neither of the cited references show or suggest matter recited in the claims.

Stein et al. '865 does not show or suggest the use of a "thermally-treated phosphorous-sulfur compound" as defined in the present specification. The term "thermally-treated phosphorous-sulfur compound" is explicitly defined on page 7, lines 10-14 of the present specification:

"Thermally-treated phosphorous-sulfur compound" means the material resulting from thermal treatment of a phosphorous-sulfur compound as defined herein under the conditions described herein."

Thus, the term "thermally-treated phosphorous-sulfur compound" appearing in claims 1, 19 and 27 must be interpreted in view of the explicit definition recited in the specification. However, Stein et al. '865 does not show or suggest the use of a "thermally-treated phosphorous-sulfur compound" as defined in the present specification. The reference states only that the additive described therein should be vaporized; it does not recite specific parameters for heating the additive, such as temperature ranges or time at temperature. Such treatment parameters are disclosed for the phosphorous-sulfur compound of the present invention because this compound is *thermally-treated* to induce a chemical change, not merely vaporized. For these

reasons, Stein et al. '865 does not show or suggest the use of a "thermally-treated phosphorous-sulfur compound" as defined in the present specification.

In addition, the Applicant respectfully submits that claims 1, 17 and 19 are unobvious in view of any combination of the cited references because neither reference shows or suggests that thermal treatment of a phosphorus –sulfur compound would *improve anti-fouling properties* of the compound, as set forth in the present application.

Stein et al. '865 relates to heating of an additive to a vapor state prior to introduction into process lines, *for purposes of reducing corrosivity of the additive*.

However, in the present invention, *anti-fouling properties* of a phosphorus –sulfur compound are improved by thermally inducing a chemical change in the compound. Examples 1, 2, 5 and 6 in the present specification illustrate the thermal conversion of representative phosphorus –sulfur compounds. Also, example 7 illustrates the enhanced coke-inhibition properties of the thermally treated compounds described in the present application.

Because there is no suggestion in Stein et al. '865 that thermal treatment of a phosphorus –sulfur compound would *improve anti-fouling properties*, and because Kaplan et al. '716 does not disclose the heating of an additive, the Applicant respectfully submits that claims 1, 19 and 27 of the present application are unobvious in view of any combination of the cited references.

For the reasons stated above, the Applicants respectfully submit that claims 1, 19 and 27 are unobvious in view of any combination of Kaplan et al. '716 and Stein et al. '865 because neither of the cited references show or suggest matter recited in the claims. As claim 1 is believed to be patentable over the cited references, it is submitted that claims 2-18 are also patentable as they depend from claim 1. Also, as claim 19 is believed to be patentable, it is submitted that claims 20-26 are also patentable as they depend from claim 19. Finally, as claim 27 is believed to be patentable, it is submitted that claims 28-33 are also patentable as they depend from claim 27.

In view of the above amendments and remarks, the Applicant respectfully submits that all rejections of record have been overcome. The Applicant respectfully requests favorable reconsideration and allowance of the present application.

Respectfully submitted,

  
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